

DOCUMENT RESUME

ED 406 935

HE 030 111

AUTHOR Bolender, Ronald
TITLE A Comparison of the Effect of Academic Peer Mentors on the Grade Point Averages of Underprepared Freshmen at Mount Vernon Nazarene College.
PUB DATE Feb 94
NOTE 40p.; Ed.D. Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043) -- Reports -- Descriptive (141)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Church Related Colleges; College Bound Students; *College Freshmen; Developmental Studies Programs; Educationally Disadvantaged; *Grade Point Average; High Risk Students; Higher Education; *Mentors; *Peer Teaching; Remedial Programs; Rural Environment; Transitional Programs; Tutorial Programs; Undergraduate Students
IDENTIFIERS *Mount Vernon Nazarene College OH

ABSTRACT

This study examined the effect of academic peer mentors on the grade-point averages of underprepared freshmen at Mount Vernon Nazarene College (Ohio), a church-related coeducational college of arts and sciences. Underprepared freshmen at this school are required to participate in the College Experience Enhancement Program. For the fall, 1993 term, a peer mentor component was added to the program. The study compared first semester grade point averages for 41 students in the 1993 group with those for 47 similarly underprepared freshmen in the 1992 program (which did not include the peer mentoring component). The paper summarizes the process of the study, setting out the background and nature of the problem, reviewing the literature on mentoring and academic peer mentoring, and defining methodology and methods. A statistically significant difference in grade point average between the two groups was not found. Possible reasons for this unexpected finding are suggested. (Contains 20 references.) (CH)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

#E

ED 406 935

A COMPARISON OF THE EFFECT OF ACADEMIC PEER MENTORS ON
THE GRADE POINT AVERAGES OF UNDERPREPARED FRESHMEN AT
MOUNT VERNON NAZARENE COLLEGE

Research Methodology

Ronald Bolender
Mount Vernon Nazarene College

A Practicum Report presented to Nova University in
partial fulfillment of the requirements for the
degree of Doctor of Education

BEST COPY AVAILABLE

Nova University

February, 1994

PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Ronald Bolender

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

AE 030 111

Abstract of a Practicum Report presented to Nova
University in partial fulfillment of the requirements
for the degree of Doctor of Education

A COMPARISON OF THE EFFECT OF ACADEMIC PEER MENTORS ON
THE GRADE POINT AVERAGES OF UNDERPREPARED FRESHMEN AT
MOUNT VERNON NAZARENE COLLEGE

by

Ronald Bolender

February, 1994

A comparison of the effect academic peer mentors have on the grade point average (GPA) of underprepared freshmen at Mount Vernon Nazarene College (MVNC) was conducted. Underprepared freshmen at MVNC are required to participate in the College Experience Enhancement Program (CEEP) during their freshman year. For this study academic peer mentoring was incorporated into CEEP. The following research question was asked and answered: Do first year CEEP students benefit (with

improved GPAs) from the use of academic peer mentors? The data for the research question was shown to not be significant. Due to the results of this study, further studies were recommended. One recommended study was to compare MVNC's academic peer mentor program design and implementation methods with other mentoring programs cited (in the literature) as being effective with regard to the research questions listed in this study.

TABLE OF CONTENTS

Chapter	Page
1. INTRODUCTION	6
Background	6
Nature of the Problem	7
Purpose	10
Research Question	11
Research Hypothesis	12
2. REVIEW OF THE LITERATURE	13
Mentoring in History	13
Mentoring and the College Student	14
Design of an Academic Peer Mentoring	
Program	16
Mentor recruitment	17
Mentor screening	17
Matching	18
Mentor training	18
Mentee orientation	18
Mentor/mentee interactions	19
3. METHODOLOGY AND PROCEDURES	21
Data Collection	25
Sample	25

Experimental and control group	
treatments	26
Source of test data	26
Data Analysis	27
Null hypothesis	27
Alternate hypothesis	27
Level of significance	27
Region of rejection	28
Statistical test	29
Definition of Terms	29
Assumptions	30
Limitations	30
4. RESULTS	32
5. DISCUSSION, CONCLUSIONS, IMPLICATIONS,	
AND RECOMMENDATIONS	34
Discussion	34
Conclusions	35
Implications	35
Recommendations for the Improvement	
of Practice	36
REFERENCES	37

Chapter 1

INTRODUCTION

Background

Mount Vernon Nazarene College (MVNC) is a church related coeducational college of arts and sciences that is sponsored and supported by the East Central Educational Region of the Church of the Nazarene including: (a) Ohio; (b) eastern Kentucky; and (c) West Virginia. It has a student body of over twelve hundred and is located in a small rural county in central Ohio. At least one third of the student body come from families where parents are not college educated and at least forty percent of the student body come from a rural or Appalachian county.

MVNC has a special program designed to help underprepared students, referred to as the College Experience Enhancement Program (CEEP). CEEP has been in operation for two years. Students with ACT Composite scores of less than 16 are targeted for the program. The program has been successful in providing underprepared students with a better than average chance of succeeding at MVNC by offering: (a) smaller sections of freshmen courses (such as English

Composition I and II) for personalized instruction from regular MVNC faculty members; (b) enhancement courses (such as reading, writing, mathematics); (c) a mechanism for holding students accountable for implementing time management and study skill techniques; (d) career awareness services; and (e) courses to develop computer literacy. In the past many of these students would not have been allowed to enroll at MVNC and the ones that would have been accepted (due to special action of the admissions and recruitment committee) would have likely dropped out by the end of their first year due to poor grades.

Nature of the Problem

The main thrust of CEEP is to provide personal attention (provided by the assistant director of retention and academic support services) to underprepared students, focusing on time management and study skills. CEEP (designed to be a one year program) has been successful in helping underprepared students academically survive the freshman year of college. However, the scope of the program has been increasing due to: (a) an increasingly larger enrollment; (b) an expansion of services to other at-risk needs (such as

supplemental instruction for courses targeted as difficult freshman courses); and (c) a number of CEEP students needing additional academic assistance during their sophomore year. The total number of students needing attention is increasing. The number of faculty and staff assigned to CEEP is not going to increase because MVNC is not willing to allocate the resources necessary to hire another qualified faculty member. The assistant director of retention and academic support services (a faculty position) is currently working at capacity.

Even though MVNC is willing to provide some additional resources in assisting the underprepared, there is a limit as to how much will be designated for long term commitments. Faculty positions at MVNC are viewed as long term commitments. Faculty as a whole have mixed views as to how much institutional resources should be allocated toward helping the underprepared student. Underlying this concern is the fact that many departments need additional faculty members due to an ever growing student population at MVNC and the college is taking a cautious approach with regard to hiring.

MVNC needs to make a decision regarding the future operations of CEEP. If a decision is made to limit the enrollment of the program, then the admissions and recruitment department needs to change its current strategy for recruiting the underprepared student. Currently, all who apply are accepted and have until the fall semester registration period (two days prior to when classes commence) to decide if they are going to enroll at MVNC. CEEP has been able to accommodate all who have enrolled during its first two years of operation.

The successful use of students as academic peer mentors would allow for the future enrollment of twelve additional CEEP freshmen each fall semester. This could be accomplished without adding faculty or additional course sections. Also the use of academic peer mentors could be useful in helping CEEP students who still need additional academic support during their sophomore year. The use of student mentors would be more cost effective than hiring additional faculty.

What are MVNC's options? One would be to limit the number of new students entering CEEP. The assistant director of retention and academic support services

could scale back the scope of activities currently offered (such as supplemental instruction for difficult freshman courses). Another option would be to use student academic peer mentors to help the assistant director of retention and academic support services provide personal services to CEEP students.

Purpose

The purpose of this research was to investigate the value of using students as academic peer mentors (independent variable) for underprepared students to supplement the personal attention currently provided by the assistant director of retention and academic support services. Underprepared freshmen need personal attention in the areas of: (a) time management; (b) improved study skills; and (c) timely completion of course assignments. The freshman seminar course that CEEP freshmen enroll in during their first semester covers all of these issues.

The academic peer mentor was to be a living example of: (a) good time management; (b) highly developed study skills; and (c) completing course assignments prior to or by the due date. Each CEEP freshman was to meet with their academic peer mentor at least once each

week during the semester. The academic peer mentor held CEEP freshmen accountable for the implementation of these concepts in their own academic lives. The tangible evidence of the successful implementation of these concepts was to be a higher grade point average (GPA) attained by underprepared freshmen by the end of the first semester (dependent variable). For this study, the 1992 fall semester underprepared students made up the control group subjects and the 1993 fall semester underprepared students made up the experimental group subjects.

This study directly related to the Research Methodology seminar. The Doctor of Education program at Nova University requires an inferential cause and effect research practicum to be conducted in relation to this seminar (Robinson & Woolf, 1991).

Research Question

A research question was developed related to the purpose of this study. The research question was: Do first year CEEP students benefit (with improved GPAs) from the use of academic peer mentors?

Research Hypothesis

A research hypothesis was developed related to the research question. The research hypothesis was:
There will be a significant difference in the first semester GPA between CEEP students who use the services of an academic peer mentor and CEEP students who do not use the services of an academic peer mentor.

Chapter 2

REVIEW OF THE LITERATURE

Many sources were reviewed from the literature related to mentoring. Primary sources used were reference books and journals related to retention and academic support as well as appropriate ERIC documents. ERIC documents were identified by a computer search using the descriptors of mentors and higher education.

Mentoring in History

The concept of mentoring comes from Greek mythology (Carruthers, 1993; Walker, 1992). Mentor was a companion of Odysseus (king of Ithaca) as is recorded in Homer's Greek epic poem, The Odyssey. Mentor was instructed to stay in Ithaca during the Trojan Wars to raise Telemachus, the king's young son. This assignment required that Mentor serve in the following roles to help prepare Telemachus to be the future king: (a) father figure; (b) teacher; (c) role model; (d) counselor; (e) advisor; (f) challenger; and (g) encourager (Carruthers, 1993).

Telemachus was the recipient of the care of Mentor. Over time recipients of mentoring have been given the following labels: (a) novice, (b) mentee; and (c)

protege (Carruthers, 1993; Tierney & Branch, 1992; Walker, 1992). Protege comes from a French verb meaning to protect (Carruthers, 1993). The label of mentee is used throughout much of the retention and academic support literature (Johnson, 1989).

The current definition of a mentor is: ". . . someone who is always there for collegial support, but not dependency. It is through interaction within a positive working relationship that proteges or novices are encouraged to achieve their personal and professional goals" (Walker, 1992, p. 6).

Mentoring is an old concept, but has been dormant in the United States until about 20 years ago. There has been a renewed interest in mentoring in the areas of: (a) business; (b) psychology; and (c) education. Several large organizations have recently developed and promoted mentoring as a management tool: (a) A T & T; (b) Federal Express; (c) Merrill-Lynch; and (d) the United States Army (Stratton & Owens, 1993).

Mentoring and the College Student

The freshman year is critical to the overall success of a student with regard to fulfilling an academic goal (usually earning a degree). The student

must do two things in order to fulfill the academic goal: (a) stay enrolled and (b) maintain a GPA acceptable to the institution. Freshmen must quickly make the transition to college life in order to fulfill the academic goal. There is a narrow window of time for a freshman to successfully begin the transition process. The first two to six weeks of the first semester are the most critical. The quality of responsiveness provided by the college to the student may make a difference in making the transition successfully (Levitz & Noel, 1989).

Some of the more successful programs related to helping with this transition are those that use students (sophomores, juniors, and seniors) to serve as mentors for first time freshmen. During the first year mentors help lead freshmen through the period of separation from home and high school into the college life experience (Johnson, 1989; Tinto, 1987). Smith, Walter, and Hoey (1992) conducted research which showed value in using peer academic support for first time students enrolling in a midwest university.

In relation to the transition element, Astin (1993) states that student to student interaction in the

college environment produces a positive partial correlation with student outcomes such as college GPAs. Astin encourages colleges to develop programs to promote student to student interaction.

An English major peer mentoring program at Indiana University of Pennsylvania is an example of a peer mentor program that promotes student to student interaction. Student to student interaction led to an improved level of quality in writing projects. Students involved did not view the program competitively, but rather as a desire to look credible in front of one's peers (both mentors and mentees) (Fryling, 1993).

Design of an Academic Peer Mentoring Program

An academic peer mentoring program should include these elements: (a) mentor recruitment; (b) mentor screening; (c) matching; (d) mentor training; (e) mentee orientation; and (f) mentor/mentee interactions (Carruthers, 1993; Johnson, 1989; Smith, Walter, & Hoey, 1992; Tierney & Branch, 1992). The study conducted by Tierney and Branch (1992) will serve as the primary model for reviewing the design of an academic peer mentoring program. Six college campuses

were involved in this research project: (a) Boston University; (b) Connecticut College; (c) Georgetown University; (d) Porterville Community College; (e) West Virginia Wesleyan College; and (f) Xavier University.

This study dealt with using college students as mentors for at-risk high school students. The goal was for mentors to help create within at-risk high school students the desire to attend college as well as to develop proper expectations for making the transition into college life.

Mentor recruitment. The first step was to make students (sophomores, juniors, and seniors) aware of the opportunity to be a mentor. This was accomplished by distributing flyers throughout campus and also by word of mouth advertising. The target was to recruit enough male and female mentors to properly match each mentee with a mentor of the same sex.

Mentor screening. After potential mentors had been identified, a screening process began. This process included: (a) filing an application; (b) having a personal interview with a staff member; (c) being made aware of the requirements of serving as a mentor; and (d) submitting references (which were verified).

Prospective mentors were encouraged to remove their name from consideration if they were uncomfortable with any part of the program.

Matching. Race and gender characteristics were the primary selection factors in matching mentor to mentee. Mentor and mentee were to share these characteristics when possible. Same-sex matching has been recommended by various studies (Carruthers, 1993; Chapman, 1989; Stratton & Owens, 1993). Mixed gender pairing has been shown to be successful in many situations, however the nature of the dyad often creates mixed erotic signals for both the mentor and mentee. It is generally recommended to be avoided if possible.

Mentor training. Most mentoring programs provide some form of training for the mentor. The training usually takes the form of an all day workshop or overnight retreat. The focus of the training is to prepare mentors for dealing with at-risk students.

Mentee orientation. Orientation sessions were conducted by staff members in charge of the mentoring program. The purpose behind the mentoring program was shared. In addition program rules such as attendance

policies to the mentor/mentee sessions were spelled out.

Mentor/mentee interactions. Mentoring is unique in that interaction between mentor and mentee is absolutely crucial to the success of a program. If the mentorss and mentee do not meet, then mentoring can not take place. Real life modeling of desired behavior is the primary goal of mentoring. In order for the mentee to see modeling (such as how successful students really study), the mentor and mentee must meet on a regular basis. Carruthers (1993) states that many large organizations have abandoned the idea that mentoring can take place in an informal unstructured program. The design must specifically call for regular interaction where participants are held accountable to the program director. Desired behaviors must be caught by the mentee, and this can only happen when regular interaction occurs (Stratton & Owens, 1993).

The review of the literature illustrates that a mentoring program should be developed and implemented for first time freshman (or at the very least, for the academically underprepared student) at MVNC. Regular student to student interaction (especially when

promoted with a mentoring program) can positively affect the outcome of the mentee's college GPA. There is a body of research (as cited) supporting the design of the mentoring program for this study.

Chapter 3

METHODOLOGY AND PROCEDURES

The research method was used with the quasi-experimental (ex post facto) design to compare the effect academic peer mentors had on the college GPAs of MVNC's underprepared freshmen. The quasi-experimental design was selected due to the real world impracticality of randomly assigning subjects to the experimental and control groups (Grizzle, Ligas, & Rankin, 1993; Issac & Michael, 1981). The ex post facto nature of the design was due to the fact that a previous group of underprepared freshmen were designated as the control group. The control group was a part of the same underprepared freshman program as the experimental group (except for the treatment variable of the academic peer mentors). The purpose of a research study is to seek an answer (using scientific procedures) to a formalized question (Robinson & Woolf, 1991).

A review of the literature related to mentors and freshmen GPAs was conducted in order to become more familiar with current trends in the use of academic peer mentors for the general freshmen population as

well as underprepared (at-risk) students.

Specifically, retention and academic support literature was reviewed as a guide for designing the academic peer mentor program for this study.

Based upon the review of the literature the basic structure of the mentoring program put forth in the study by Tierney and Branch (1992) was modeled in this study. The key elements of this design included: (a) mentor recruitment; (b) mentor screening; (c) matching; (d) mentor training; (e) mentee orientation; and (f) mentor/mentee interaction.

Mentor recruitment involved selecting MVNC students who modeled desired traits found in disciplined students, to serve as academic peer mentors. Traits considered were: (a) proper time management; (b) highly developed study skills; and (c) completion of course assignments in a timely manner. Interpersonal communication skills were another criterion used in the selection process for academic peer mentors. Applications for academic peer mentors were solicited from the 1992-1993 student body. Applicants were screened by the assistant director of retention and academic support services through conducting personal

interviews with the applicants and by following up on the MVNC faculty members listed as references. Interpersonal communication skills of the applicant were subjectively determined by the personal interview.

The gender of the academic peer mentor was also considered in the selection process. There is a limited amount of study space available outside of the dormitories at MVNC. Most of the weekly contacts between mentor and mentee took place in a dorm room where there was ample space for two people to work together. Underprepared freshmen were appointed to an academic peer mentor of the same sex. This was necessary due to the fact that MVNC does not allow members of the opposite sex in the same dormitory. Also, the literature review revealed that same-sex mentor/mentee pairing usually works best. The ratio of male to female mentors was determined by the gender ratio found within the 1993 fall semester group of underprepared freshmen.

Each 1993 fall semester underprepared student was assigned to an academic peer mentor. This group served as the experimental group. The 1992 fall semester underprepared students served as the control group

(those who did not have an academic peer mentor). There was gender matching (of mentors to 1993 fall semester underprepared students) in the experimental group due to campus housing policies.

Training for the academic peer mentors was held during the beginning of the 1993 fall semester. Training consisted of: (a) two four hour training sessions during the first two weeks of the 1993 fall semester; (b) on-going weekly one hour training sessions; and (c) an academic peer mentor manual outlining the mentoring objectives for each week. The goal of the training was to maintain consistency among academic peer mentors for the application of treatment.

During the first week of classes of the 1993 fall semester, underprepared freshmen had a half-hour orientation session outlining the purpose and regulations of the academic peer mentor program. Previously, underprepared freshman signed a contract acknowledging that they would be required to participate in the academic peer mentor program.

There were thirteen mentor/mentee interactions per underprepared freshmen scheduled during the 1993 fall semester. Interactions were scheduled to take place

for one hour per week. The mentor developed a strategy (based on the weekly mentor training session) for the weekly interaction. A report of the results of the weekly interaction was given by the mentor to the assistant director of retention and academic support services. The report included a review of the mentee's required time management workbook and an appraisal of the mentee's implementation of new study skills learned in either previous weekly interactions or from the freshman seminar course. The mentor was paid for the weekly interaction sessions and mentee attendance at these interaction sessions was a substantial portion of the final grade received in the freshman seminar course.

Data Collection

Sample. The population (that the sample was drawn from) is made up of all underprepared students who enter MVNC during their freshman year. The sample consisted of: (a) underprepared students who entered MVNC during the 1992 fall semester and (b) underprepared students who entered MVNC during the 1993 fall semester.

Experimental and control group treatments. The control group (ex post facto) was comprised of subjects who entered MVNC as underprepared freshmen during the 1992 fall semester. They were required to participate in CEEP (course selections were predetermined and similar for all participants). The independent variable (services of the academic peer mentors) was not applied to the control group.

The experimental group was made up of subjects who were classified as underprepared freshmen upon entering MVNC during the 1993 fall semester. They were required to participate in CEEP (course selections were predetermined and similar for all participants). This group was also required to use the independent variable (services of the academic peer mentors).

Source of test data. Academic transcripts listing the subjects taken by both the control and experimental groups were obtained from the office of records and registration. Only the final GPA for the first semester of the freshman year was used in this study (dependent variable).

Data Analysis

Null hypothesis. The null hypothesis for this study was: There will not be a significant difference between the first semester final GPA between CEEP students who used the services of an academic peer mentor and CEEP students who did not use the services of an academic peer mentor. The null hypothesis can be written as: $H_0: \mu_{\text{First Semester GPA (Experimental)}} = \mu_{\text{First Semester GPA (Control)}}$

Alternate hypothesis. The alternate hypothesis for this study was: There will be a significant difference between the first semester final GPA between CEEP students who used the services of an academic peer mentor and CEEP students who did not use the services of an academic peer mentor. This can be written as:

$$H_a: \mu_{\text{First Semester GPA (Experimental)}} \neq \mu_{\text{First Semester GPA (Control)}}$$

Level of significance. The significance level of $\alpha = .05/2$ (for a two-tailed t-test) was selected for two reasons: (a) many of the studies noted during the review of the literature used this as an acceptable level and (b) in the social sciences, this is often used as an acceptable level in order to avoid Type I and Type II errors (Issac and Michael, 1981). If this study is replicated with similar test results, then it

would be tolerable to accept significance levels of 10 to 20 percent (.1 and .2). This study was not a replication of a previous study, therefore, a .05 significance level was thought to be acceptable.

The purpose of this study was to see if additional underprepared freshmen should be added to an otherwise successful program (CEEP) by using students as academic peer mentors. Since additional funds were going to be allocated, there was concern that the probability of making an error in rejecting the null hypothesis be rather conservative.

Region of rejection. The critical region of rejection for the null hypothesis was determined by the sample size and by the fact that the data was tested using a two-tailed independent samples t-test (Best & Kahn, 1993). Using a set of t-test tables (Freund, 1979), the critical region of rejection was determined. With a two-tailed t-test having a significance level of .05/2 and 86 degrees of freedom, the critical region of rejection was 1.960 for both tails of the normal curve. The equation can be written as: Critical Region of Rejection $t_{\text{critical value}} (\alpha = .05/2, df = 86) = \pm 1.960$.

Statistical test. The two-tailed independent samples t-test was selected for this study. "A t-test is a statistical test that allows you to compare two means to determine the probability that the difference between the means is a real difference rather than a chance difference" (Tuckman, 1988, p. 271). Each observation is independent and is not dependent upon the selection of any other case (Best & Kahn, 1993; Norusis, 1988). The experimental and control groups in this study were designed to study the effect the independent (treatment) variable had on the dependent variable (final first semester GPAs). All observations were independent and the sample (subjects of the experimental and control groups) was assumed to be a representation of the general population of all first time underprepared freshmen who enroll at MVNC.

Definition of Terms

Freshmen are classified as underprepared if their ACT Composite score is less than 16. The cutoff was established based upon a ten year historical study of ACT scores of freshmen who failed by the end of their first year at MVNC. This study was informally conducted during the fall of 1990 by the vice president

of academic affairs at MVNC. MVNC considers all underprepared students at-risk. In addition, at-risk students also include students who may show reasonable academic ability but lack the motivation necessary to achieve their academic goal (usually earning a degree).

Academic peer mentors are students who have previously demonstrated: (a) good time management; (b) highly developed study skills; and (c) timely completion of course assignments. They attempt to model good academic habits for underprepared freshmen.

Assumptions

This study made the assumption that the first semester GPA is a proper measurement for determining the effectiveness of academic peer mentors on underprepared students. An assumption was also made that the results of this study can be inferred to the general population of underprepared freshmen entering MVNC.

Limitations

The results of this study may not be replicable in another setting or for another group of underprepared MVNC freshmen. The results cannot be generalized to

the whole population of underprepared freshmen at all colleges and universities.

The inability to randomly assign underprepared freshmen to experimental units does not allow for control of extraneous variables. Using an experimental unit from one semester (1992 fall semester) for comparison with an experimental unit of another semester (1993 fall semester) limits the ability to generalize the results of the study.

Chapter 4

RESULTS

The data was collected and there were 47 underprepared freshmen identified in CEEP for the 1992 fall semester (control group). There were 41 underprepared freshmen identified for the 1993 fall semester (experimental group).

The null hypothesis was tested using the two-tailed independent samples t-test (significance level $\alpha = .05/2$). The test was conducted using SPSS for Windows Release 5.0. (1992).

The null hypothesis to be tested was: There will not be a significant difference between the first semester final GPA between CEEP students who used the services of an academic peer mentor and CEEP students who did not use the services of an academic peer mentor. The result of the two-tailed independent t-test was: $t_{\text{calculated}} = -.94$ (two-tailed significance level = .352).

This test failed to reject the null hypothesis since the calculated value of t (-.94) was not beyond the critical value of ± 1.960 . Due to the results of

this test there is a possibility that a Type II error exists.

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND
RECOMMENDATIONSDiscussion

The research question for this study was: Do first year CEEP students benefit (with improved GPAs) from the use of academic peer mentors? The null hypothesis related to this research question was not rejected in the two-tailed independent samples t-test. Based on the results of this test, there does not seem to be a statistical significant difference between the first semester final GPA between CEEP students who used the services of an academic peer mentor and CEEP students who did not use the services of an academic peer mentor. The comparison of the experimental and control groups did not indicate that the independent variable had a cause and effect relationship on the dependent variable. This study did not support findings cited in the various studies found in the review of literature (Astin, 1993; Fryling, 1993; Smith, Walter, & Hoey, 1992; Tierney & Branch, 1992) regarding the relationship of student to student interactions (such

as academic peer mentoring) with student outcomes such as college GPAs.

Conclusions

The results reached by this study does not allow MVNC to claim that the academic peer mentoring program for underprepared freshmen makes a statistical significant difference in final first semester GPAs. A Type II error could exist as a result of a flaw in the design of this study. It could also be that the wrong variables were tested to show the positive benefits of the academic peer mentoring program for underprepared freshmen.

Implications

The results of this study indicate that before any expansion is made to the academic peer mentor program, a decision should be made regarding the results of this study. The academic peer mentor program cannot be used with confidence as a method for improving CEEP students' final first semester GPAs. Even if the study had a Type II error, it would be wise not to expand the program until further studies can be conducted.

The results of this study raise the question regarding the current level of allocation of resources.

For the immediate future, should MVNC continue to recruit and train students to become mentors and then require CEEP students (as mentees) to work with their assigned mentor for an hour each week?

Recommendations for the Improvement of Practice

The academic peer mentor program for CEEP students needs to be reviewed. There may be other variables that need to be studied to illustrate benefits (that are both statistically and practically significant) from programmed student to student interactions between mentors and mentees.

The design and implementation of the academic peer mentor program needs to be examined by comparing it with other successful mentoring programs at other institutions as cited earlier. The following key elements should be reviewed: (a) mentor recruitment; (b) mentor screening; (c) matching; (d) mentor training; (e) mentee orientation; and (f) mentor/mentee interactions. A survey of perceived program benefits needs to be conducted for both mentors and mentees.

REFERENCES

- Astin, A. W. (1993). What Matters in College? Four Critical Years Revisited. San Francisco: Jossey-Bass Publishers.
- Best, J. W., & Kahn, J. V. (1993). Research in Education (7th ed.). Boston: Allyn and Bacon.
- Carruthers, J. (1993). The principles and practice of mentoring. In B. J. Caldwell & E. M. A. Carter (Eds.), The Return of the Mentor: Strategies for Workplace Learning (pp. 9-24). Washington, DC: The Falmer Press.
- Chapman, S. C. (1989). Women studies. In M. L. Upcraft & J. N. Gardner (Eds.), The Freshman Year Experience: Helping Students Survive and Succeed in College (pp. 287-302). San Francisco: Jossey-Bass Publishers.
- Freund, J. E. (1979). Modern Elementary Statistics (5th ed.). Englewood Cliffs, NJ: Prentice-Hall Incorporated.
- Fryling, M. S. (1993, Fall). One department at IUP solves its own problems. The Freshman Year Experience Newsletter, p. 4.
- Grizzle, G. M., Ligas, M. R., & Rankin, G. E. (1993). Research Methodology: A Study Guide for the Core Seminar. Fort Lauderdale, FL: Nova University, Abraham S. Fischler Center for the Advancement of Education: Programs for Higher Education.
- Isaac, S., & Michael, W. B. (1981). Handbook in Research and Evaluation (2nd ed.). San Diego: EDITS Publishers.
- Johnson, C. S. (1989). Mentoring programs. In M. L. Upcraft & J. N. Gardner (Eds.), The Freshman Year Experience: Helping Students Survive and Succeed

in College (pp. 118-128). San Francisco: Jossey-Bass Publishers.

Levitz, R. S., & Noel, L. (1989). Connecting students to institutions: keys to retention and success. In M. L. Upcraft & J. N. Gardner (Eds.), The Freshman Year Experience: Helping Students Survive and Succeed in College (pp. 65-81). San Francisco: Jossey-Bass Publishers.

Norusis, M. J. (1988). The SPSS Guide to Data Analysis for SPSSX. Chicago: SPSS, Incorporated.

Robinson, V., & Woolf, P. L. (1991). Guide to the Practicum Process (3rd ed.). Fort Lauderdale, FL: Nova University, Abraham S. Fischler Center for the Advancement of Education: Programs for Higher Education.

Smith, J. B., Walter, T. L., & Hoey, G. (1992). Support programs and student self-efficacy: do first-year students know when they need help? Journal of The Freshman Year Experience, 4(2), 41-68.

SPSS for Windows Release 5.0 [Computer program]. (1992). Chicago: SPSS, Incorporated.

Stratton, S. P., & Owens, J. R. (1993). Mentoring: enhancing values development through intentional relationships. Faculty Dialogue, 19, 91-104.

Tierney, J. P., & Branch, A. Y. (1992). College Students as Mentors for At-Risk Youth: A Study of Six Campus Partners in Learning Programs. Philadelphia, PA: Public/Private Ventures.

Tinto, V. (1987). Leaving College: Rethinking the Causes and Cures of Student Attrition. Chicago: The University of Chicago Press.

Tuckman, B. W. (1988). Conducting Educational Research (3rd ed.). New York: Harcourt Brace Jovanovich, Publishers.

Walker, L. (1992, November). Mentoring: A Review of the Literature. Paper presented at the meeting of the Mid-South Education Research Association, Knoxville, TN. (ERIC Document Reproduction Service No. ED 354 229)